38. *Antiphlogistic Treatment of Cholera.*—During the first invasion of Paris by cholera, 23 patients were treated by Dr. **Huet Despres** in the temporary hospital *De la Réserve.* The treatment was essentially antiphlogistic. Of the number mentioned 4 only died, 19 were cured.—*Annales de la Méd. Phys. June,* 1832.

CHEMISTRY.

39. *Analysis of Camphor and some Volatile Oils.*—M. **Dumas** observes, that essential oils may be divided into—first, those which are entirely composed of carbon and hydrogen, such as the oil of lemon, turpentine, and naphtha; secondly, oxygenated oils, as camphor, oil of aniseed, and many others; thirdly, the essential oils which admit of a new element in their composition, as the oil of mustard, which contains sulphur, and that of almonds, which contains azote.

Some fine isolated crystals of camphor taken from the centre of a sublimed cake of that substance, yielded such proportions of carbonic acid and water as by M. Dumas' calculation gave per cent. very nearly

Carbon - - - - - - - -	79.28
Oxygen - - - - - - - -	10.36
Hydrogen - - - - - - - -	10.36
	100.

Neglecting on this, as on other occasions, the atomic weights adopted by M. Dumas, it will be seen that camphor is composed of

Ten atoms carbon - - - -	6 × 10 =	60	or 79
One atom oxygen - - - -		8	or 10.5
Eight atoms hydrogen - - -	1 × 8 =	8	or 10.5
		76	100.

Proust discovered the existence of camphor in oil of lavender; M. Dumas analysed some crystals of lavender camphor procured from the College de France: the results were perfectly similar to those obtained from common camphor.

M. Dumas considers camphor as composed of a peculiar carburetted hydrogen, (to which he gives the name of *camphogen,*) and oxygen, or ten atoms carbon + eight atoms hydrogen; or

Camphogen - - - - - - - -	68	89.4
One atom oxygen - - - - - - -	8	10.6
	76	100.

The density of the vapour of camphor was found to be 5.468, and M. Dumas observes, that supposing it be composed of a volume of camphogen = 4.7634 + half a volume of oxygen = 0.5513, its density would be 5.3147, which comes very near to the experimental result. Oil of turpentine was found to be constituted precisely of the same proportions of carbon and hydrogen as camphogen:—the density of its vapour was by experiment 4.765 to 4.764, which agrees with the analysis.

When oil of peppermint is cooled to about 32°, it yields prismatic crystals, readily separable from the fluid part. These crystals pressed between folds of blotting paper, are colourless; fusible at 75° Fahr.; volatile without decomposition, and again crystallize; they are very slightly soluble in water, but dissolve in alcohol, æther and oils. They have the smell and taste of peppermint in a great degree. By analysis it appeared that this camphor was composed of 77.3

carbon, 12.6 hydrogen, and 10.1 oxygen in 100 parts; and it differs from common camphor in containing two more volumes of hydrogen.

The solid portion of oil of aniseed yielded by analysis, in 100 parts, 81.35 carbon, 8.26 hydrogen, 10.39 carbon: by adjusting these results, slightly, it appears that oil of aniseed contains two volumes less of hydrogen than common camphor.

M. Dumas conceives that essential oils are compounds of hydrogen and carbon, which, by oxydizement, produce camphors; this degree of oxydizement, however, is not to be confounded with the higher degree of it, which occurs when the oils are freely exposed in thin strata to the air, for they are then converted into resins.

It appears from these experiments, that

10	carbon	10	hydrogen	1 concrete oil of peppermint.
10	do.	8	do.	1 oxygen form common camphor.
10	do.	8	do.	oil of turpentine.
10	do.	6	do.	1 concrete oil of aniseed.
10	do.	4	do.	naphthaline.

M. Dumas is disposed to believe that the absorption of oxygen by essential oils, produces different effects according as it occurs under the influence of water, or when dry. The constitution of pure oil of lemons appears to be perfectly similar to that of oil of turpentine by M. Dumas' analysis, and it differs very little from that of M. Th. de Saussure. M. Dumas finds naphtha to be composed of 6 atoms carbon + 5 hydrogen; a conclusion which also agrees nearly with that of M. de Saussure; the density of its vapour should therefore be 2.870, which varies but slightly from that obtained by experiment.—*Rep. Pat. Invent. March*, 1833.

40. *Process for Obtaining Conia.*—Mr. **Golding Bird** recommends the following process for obtaining conia. "Digest the fresh leaves of conium maculatum in alcohol, and set aside for some days and strain the mixture; boil the alcoholic tincture for a few minutes, and when cold filter. By this operation a solution is obtained of malate of conia with extractive and some salts; decolorize with animal carbon, again filter, and add to the clear liquor a solution of carbonate of soda. A precipitate of carbonate of conia will fall, which must be dried and dissolved in acetic acid; ammonia will now throw down conia quite pure.

"Conia, as thus obtained, is a powder perfectly white, slightly soluble in water, and very soluble in alcohol and æther. It turns red litmus paper blue, and combines with acids, forming in some cases crystalline compounds, in others gummy masses. When heated with nitric acid, a brownish-yellow solution is formed, and, by evaporation, oxalic acid is obtained. When dilute nitric acid is used, a nitrate is obtained in fine needles.

"When attempting to prepare conia according to the German process, after obtaining the spirituous extract and adding water and protoxide of lead, a lamp heat was applied: a dense, fœtid, suffocating vapour was given off, smelling intensely strong of hemlock, and producing a violent sensation of asphyxia; while, on the surface of the fluid, there appeared films of an oily matter. This operation was repeated in an alembic, and the vapours were condensed in a cool receiver. I thus obtained a volatile oil, very inflammable, and smelling powerfully of hemlock."—*Lond. Med. Gaz. November 3d*, 1832.

41. *Analysis of the Leaves of the Conium Maculatum.*—Mr. **Golding Bird** has obtained the following results from the proximate analysis of the leaves of the conium maculatum, 1. Malate of conia; 2. A fœtid volatile oil; 3. Chlorophylle; 4. Resin; 5. Fœculin; 6. Albumen; 7. Lignin; 8. Acetates of potass and ammonia; 9. Malate of lime. The ashes contained traces of, 1. Chloride of sodium; 2. Protoxide of iron; 3. Magnesia; 4. Lime.—*Ibid.*